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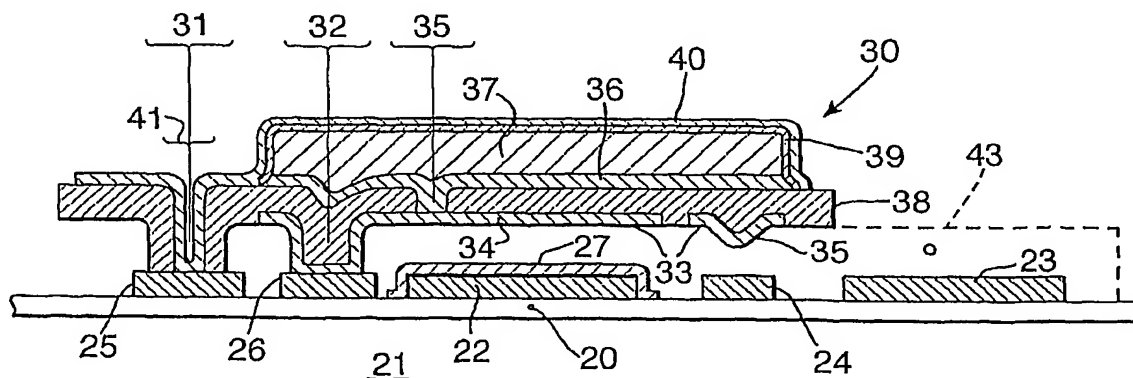
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- (71) Applicant (for all designated States except US): **QINETIQ LIMITED** [GB/GB]; Registered Office, 85 Buckingham Gate, London SW1 6PD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BUNYAN, Robert, John, Tremayne** [GB/GB]; QinetiQ Limited, Malvern Technology Centre, Bldg: E Room 9A/07, St Andrews Road, Malvern, Warwickshire WR14 3PS (GB). **COMBES, David, Jonathon** [GB/GB]; QinetiQ Limited, Malvern Technology Centre, Bldg: E Room 9A/01, St Andrews Road, Malvern, Warwickshire WR14 3PS (GB). **BRUNSON, Kevin, Michael** [GB/GB]; QinetiQ Limited, Malvern Technology Centre, Bldg: E Room: 9A/08, St Andrews Road, Malvern, Worcs WR14 3PS (GB).
- (74) Agent: **DAVIES, Philip**; QinetiQ Ltd, IP Formalities, Cody Technology Park, A4 Building, Room G016, Ively Road, Farnborough, Hampshire GU14 0LX (GB).
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(54) Title: MICRO ELECTROMECHANICAL SYSTEM SWITCH.



(57) Abstract: A micro electromechanical system (MEMS) switch includes a fixed contact (24) and a moveable contact (35) on an armature (30). The switch has electrodes (22, 34) associated with both the fixed and moveable contacts for providing an electrostatic switch operation and piezoelectric material with associated electrodes (36, 40) for bending the armature upon application of an electric voltage and providing an initial piezoelectric switch operation followed by electrostatic switching and clamping. The armature is of curved shape which is bent away from the fixed contact when in a switch open condition with zero applied voltage. This gives a large, e.g. 3µm, switch gap in an OFF state which is reduced by piezoelectric operation suitable for electrostatic switch closing. A curved condition is provided by varying strain across the armature thickness, and is produced during manufacture of the switch.

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